WHAT IS CLAMED IS:

1   1.   A printer having a scanning function for reading and printing an

2   original, comprising:

3   color converting means for converting a first color component

4   signal based on the thus read original into a second color component

5   signal used for printing by referring to a lookup table,

6   wherein said lookup table is formed so that the second color

7   component represents black when each of the color signals constituting

8   the first color component signal is in the range from a value indicating

9   the deepest color state to a predetermined value.

1   2.   A printer having a scanning function for reading and printing an

2   original, comprising:

3   color converting means for converting a first color component

4   signal based on the original thus read into a second color component

5   signal used for printing by referring to a lookup table,

6   wherein said lookup table is formed so that the second color

7   component represents white when each of the color signals constituting

8   the first color component signal is in the range from a value indicating

9   the lightest color state to a predetermined value.

1   3.   The printer having the scanning function as claimed in claim 1 or

2   2, wherein the first color component signal and the second color

3   component signal are constructed by plural signals indicating colors.

1   4.   The printer having the scanning function as claimed in claim 1 or

2   2, wherein the first color component signal is an RGB signal, and the

3   second color component signal is a CMYK signal.

1   5.   The printer having the scanning function as claimed in claim 1,

2   wherein said lookup table has grids set to be non-equidistant, and in the

3   vicinity of a portion where said first color component signal indicates the

4   deepest color state, the distance between the grids is set to be large.

1   6.   The printer having the scanning function as claimed in claim 1,

2   wherein:

3   said lookup table is expressed by grids including discontinuous

4   values; and

5   said grids are set to be non-equidistant, and a distance between

6   said grids, in the vicinity of a portion where each of color signals

7   constituting the first color component signal indicates the deepest color

8   state, is set to be wide.

1   7.   The printer having the scanning function as claimed in claim 2,

2   wherein:

3   said lookup table is expressed by grids including discontinuous

4   values; and

5   said grids are set to be non-equidistant, and a distance between

6   said grids, in the vicinity of a portion where each of color signals

7   constituting the first color component signal indicates the lightest color

8   state, is set to be wide.

1   8.   The printer having the scanning function as claimed in claim 1 or

2   2, wherein said color converting means has a second lookup table

3   different from said lookup table, and converts the first color component

4   signal based on the read-out original to the second color component

5   signal used for printing by selectively referring to any one of said lookup

6   table and said second lookup table.

1   9.   The printer having the scanning function as claimed in claim 8,

2   wherein said color converting means selects any one of said lookup table

3   and said second lookup table in accordance with a user's setting.

1   10.   A color converting device for converting a subject color for

2   conversion comprising a combination of color signals to a target color

3   comprising a combination of color signals,

4   wherein when each of the color signals of the subject color is in

5   the range from a value indicating the deepest color state to a

6   predetermined value, color conversion is carried out by using a lookup

7   table formed in order that the target color is to be black.

1   11.   A color converting device for converting a subject color for

2 conversion comprising a combination of color signals to a target color

3 comprising a combination of color signals,

4   wherein when each of the color signals of the subject color is in

5 the range from a value indicating the lightest color state to a

6 predetermined value, color conversion is carried out by using a lookup

7 table formed in order that the target color is to be white.

1   12.   The color converting device as claimed in claim 10 or 11, wherein

2 the subject color for conversion is constructed by RGB and the target

3 color is constructed by CMYK.

1   13.   The color converting device as claimed in claim 10 or 11,

2 wherein:

3   said lookup table is expressed by grids including discontinuous

4   values; and

5   said grids are set to be non-equidistant, and grids in a portion

6 where the target color indicates black and grids in a portion where the

7 target color indicates white, have a larger distance than grids in other

8 portions.

1   14.   A color converting method for converting a subject color for

2 conversion comprising a combination of color signals to a target color

3 comprising a combination of color signals,

4   wherein color conversion is carried out so that the target color is

5 to be black when each of the color signals constituting the subject color is

6   in the range from a value indicating the deepest color state to a

7   predetermined value.

1   15.   A color converting method for converting a subject color for

2   conversion comprising a combination of color signals to a target color

3   comprising a combination of color signals,

4   wherein color conversion is carried out so that the target color is

5   to be white when each of the color signals constituting the subject color is

6   in the range from a value indicating the lightest color state to a

7   predetermined value.

1   16.   The color converting method as claimed in claim 14 or 15, wherein

2   the color conversion is carried out by referring to a lookup table

3   predetermined with respect to correspondence between the color signal

4   combination of the subject color and the color signal combination of the

5   target color.